

US EPA ARCHIVE DOCUMENT

December 2009

FORM 1, FORM C, and SDAA
KPDES Individual Permit Coverage Application

Beech Fork Processing, Inc.
KDMRE Permit No. 880-0148 A4
Middle Fork Surface Mine

Prepared for:

Beech Fork Processing, Inc.
P.O. Box 190
Lovely, KY 41231

Prepared by:

Summit Engineering, Inc.
131 Summit Drive
Pikeville, KY 41501
Telephone: (606) 432-1447



SUMMIT ENGINEERING, INC.

December 14, 2009

Ross Bishop
Inventory & Data Management Section
KPDES Branch
Division of Water
14 Reilly Road
Frankfort, Kentucky 40601

RE: Beech Fork Processing, Inc.
DMRE Permit No. 880-0148 A4
Middle Fork of Rockcastle Creek

Mr. Bishop:

Please find enclosed copy of a completed Form 1 and Form C submitted for the above-referenced surface mine to be located in Martin County. Beech Fork Processing, Inc. seeks approval for individual permit coverage under KPDES for their proposed mining activities.

These activities include the construction of eight additional dugouts to facilitate the expansion of surface and underground mining activities. The proposed activities were previously permitted under KDMRE Permit No. 860-0448 A3 (KYG045449).

If you have any questions, or require additional information, please call me at (606) 432-1447 ext. 311 or e-mail khaas@summit-engr.com.

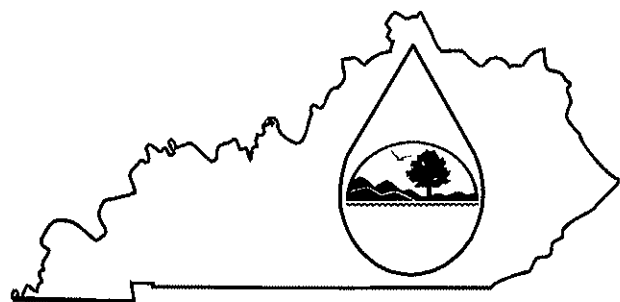
Regards,

Kari Haas
Environmental Scientist

c: file

enclosure

KPDES FORM 1



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

This is an application to: (check one)

- ☐ Apply for a new permit.
☐ Apply for reissuance of expiring permit.
☐ Apply for a construction permit.
☒ Modify an existing permit.

Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Short Form C

For additional information contact:

KPDES Branch (502) 564-3410

I. FACILITY LOCATION AND CONTACT INFORMATION		AGENCY USE							
A. Name of business, municipality, company, etc. requesting permit Beech Fork Processing, Inc.									
B. Facility Name and Location					C. Facility Owner/Mailing Address				
Facility Location Name: Middle Fork Surface Mine					Owner Name: Beech Fork Processing, Inc.				
Facility Location Address (i.e. street, road, etc.): Near the intersection of KY Rt. 3 and Davella Road					Mailing Street: P.O. Box 190				
Facility Location City, State, Zip Code:					Mailing City, State, Zip Code: Lovely, KY 41231				
					Telephone Number: (606) 789-7655				

II. FACILITY DESCRIPTION			
A. Provide a brief description of activities, products, etc: Surface Coal Mining			
B. Standard Industrial Classification (SIC) Code and Description			
Principal SIC Code & Description:	1221 – Bituminous Coal & Lignite Mining		
Other SIC Codes:			

III. FACILITY LOCATION	
A. Attach a U.S. Geological Survey 7 ½ minute quadrangle map for the site. (See instructions)	
B. County where facility is located: Martin	City where facility is located (if applicable):
C. Body of water receiving discharge: Tributaries of Middle Fork of Rockcastle Creek	
D. Facility Site Latitude (degrees, minutes, seconds): 37° 47' 06" N	Facility Site Longitude (degrees, minutes, seconds): 82° 36' 20" W
E. Method used to obtain latitude & longitude (see instructions): Topographic map coordinates	
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable):	

IV. OWNER/OPERATOR INFORMATION

A. Type of Ownership: <input type="checkbox"/> Publicly Owned <input checked="" type="checkbox"/> Privately Owned <input type="checkbox"/> State Owned <input type="checkbox"/> Both Public and Private Owned <input type="checkbox"/> Federally owned	
B. Operator Contact Information (See instructions)	
Name of Treatment Plant Operator: Beech Fork Processing, Inc.	Telephone Number: (606) 789-7655
Operator Mailing Address (Street): P.O. Box 190	
Operator Mailing Address (City, State, Zip Code): Lovely, KY 41231	
Is the operator also the owner? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the operator certified? If yes, list certification class and number below. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Certification Class:	Certification Number:

V. EXISTING ENVIRONMENTAL PERMITS

Current NPDES Number: KYG045449	Issue Date of Current Permit: 3/27/01	Expiration Date of Current Permit:
Number of Times Permit Reissued:	Date of Original Permit Issuance:	Sludge Disposal Permit Number:
Kentucky DOW Operational Permit #:	Kentucky DSMRE Permit Number(s): 880-0148 Am. 4	

C. Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source		
Solid or Special Waste		
Hazardous Waste - Registration or Permit		

VI. DISCHARGE MONITORING REPORTS (DMRs)

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). The information in this section serves to specifically identify the department, office or individual you designate as responsible for submitting DMR forms to the Division of Water.

A. Name of department, office or official submitting DMRs:	Ronald B. Hall, Vice President
B. Address where DMR forms are to be sent. (Complete only if address is different from mailing address in Section I.)	
DMR Mailing Name:	
DMR Mailing Street:	
DMR Mailing City, State, Zip Code:	
DMR Official Telephone Number:	

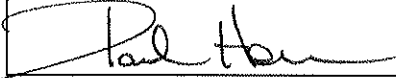
VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount. Descriptions of the base fee amounts are given in the "General Instructions."

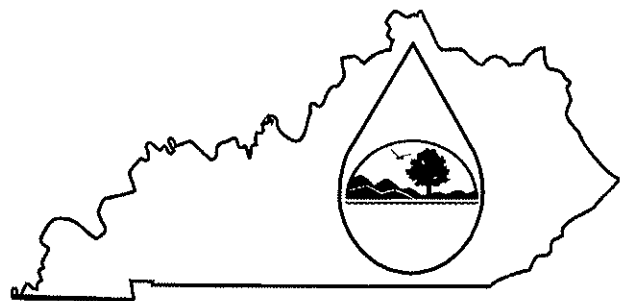
Facility Fee Category:	Filing Fee Enclosed:
------------------------	----------------------

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): Mr. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/> <u>Paul Horn Manager of Eng. (POA)</u>	TELEPHONE NUMBER (area code and number): <u>(606) 298-2300</u>
SIGNATURE 	DATE: <u>12-8-2009</u>

KPDES FORM C



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility: Middle Fork Surface Mine	County: Martin						
I. OUTFALL LOCATION	AGENCY USE						

For each outfall list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
Pond 69	37	47	54	82	36	29	Setser Branch
Pond 70	37	47	52	82	36	35	In Series with Existing Pond 14
Pond 71	37	48	06	82	36	33	In Series with Existing Pond 32E
Pond 72	37	48	19	82	36	28	In Series with Existing Pond 56
Pond 73	37	48	16	82	36	25	In Series with Existing Pond 35A
Pond 74	37	47	53	82	36	46	In Series with Existing Pond 14
Pond 75	37	47	56	82	36	52	In Series with Existing Pond 55
Pond 76	37	47	18	82	36	11	Middle Fork

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

- A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfall. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.
- B. For each outfall, provide a description of: (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow 10 Year (include units)	Description	List Codes from Table C-1
Pond 69	Surface runoff	19.97 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 70	Surface runoff	19.77 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 71	Surface runoff	10.72 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 72	Surface runoff	11.87 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 73	Surface runoff	12.36 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 74	Surface runoff	11.73 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 75	Surface runoff	11.24 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A
Pond 76	Surface runoff	15.01 cfs (peak)	Sedimentation	1-U
			Discharge to surface water	4-A

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued)

- C. Except for storm water runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐

Yes (Complete the following table.)

☒

No (Go to Section III.)

OUTFALL NUMBER	OPERATIONS CONTRIBUTING FLOW	FREQUENCY		FLOW					
		Days Per Week	Months Per Year	Flow Rate (in mgd)		Total volume (specify with units)		Duration (in days)	
		(specify average)	(specify average)	Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily		
(list)	(list)								

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ Yes (Complete Item III-B) List effluent guideline category:

☒ No (Go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measures of operation)?

☐ Yes (Complete Item III-C) ☒ No (Go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents the actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

MAXIMUM QUANTITY			Affected Outfalls (list outfall numbers)
Quantity Per Day	Units of Measure	Operation, Product, Material, Etc. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any federal, state or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders and grant or loan conditions.

☐ Yes (Complete the following table) ☒ No (Go to Item IV-B)

IDENTIFICATION OF CONDITION AGREEMENT, ETC.	AFFECTED OUTFALLS		BRIEF DESCRIPTION OF PROJECT	FINAL COMPLIANCE DATE	
	No.	Source of Discharge		Required	Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered 5-18.

D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

POLLUTANT	SOURCE	POLLUTANT	SOURCE
NONE			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you use or produce, or expect to use or produce over the next 5 years as an immediate or final product or byproduct?

☐ Yes (List all such pollutants below) ☒ No (Go to Item VI-B)

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharge of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐ Yes (Complete Item VI-C) ☒ No (Go to Item VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail to the best of your ability at this time the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years. Continue on additional sheets if you need more space.

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge of or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (Identify the test(s) and describe their purposes below) ☒ No (Go to Section VIII)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

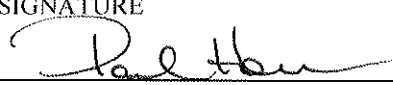
☒ Yes (list the name, address, and telephone number of, and pollutants analyzed by each such laboratory or firm below)

☐ No (Go to Section IX)

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)
Summit Engineering Inc.	Route 460 West 33102 Riverside Drive Big Rock, VA 24603	Tel: (276) 530-7220 Fax: (276) 530-7280	Total Suspended Solids Sulfate pH Iron, Total Hardness Manganese, Total
McCoy & McCoy Laboratories Inc.	173 Island Creek Road Pikeville, KY 41501	Tel: (606) 432-3104	Antimony, Total Arsenic, Total Beryllium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Mercury, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total Zinc, Total Cyanide, Total Phenols, Total

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): PAUL HORN MANAGER OF ENGINEERING (POA)	TELEPHONE NUMBER (area code and number): (606) 298-2300
SIGNATURE 	DATE 12-8-2009

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. (See instructions)

***The following tables include only those pollutants which are believed to be present in the sample or for which testing is required**

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)										OUTFALL NO. Pond 14 of Lower Twin Branch of Middle Fork	
Part A -- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.											
1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)			4. INTAKE (optional)			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)	d. No. of Analyses	a. Concentration	b. Mass	a.		b. No. of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass					Long-Term Avg. Value (1) Concentration	(2) Mass	
Total Suspended Solids (TSS)	92					1	mg/L				
Flow (in units of MGD)	VALUE 0.2261		VALUE			1	MGD		VALUE		
pH	MINIMUM 6.80	MAXIMUM 6.80	MINIMUM		MAXIMUM	1	STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

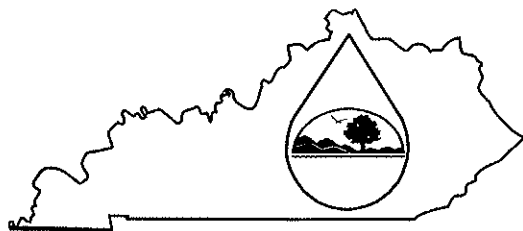
1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		6. INTAKE (optional)			
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
Hardness (as CaCO ₃)	X		62						1	mg/L				
Sulfate (as SO ₄) (14808-79-8)	X		0.1 (Below Detection Limit)						1	mg/L				
Iron, Total (7439-89-6)	X		8.69						1	mg/L				
Manganese, Total (7439-96-6)	X		1.19						1	mg/L				

Part C – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark “X” in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark “X” in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark “X” in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	Maximum Daily Value (1) Concentration	(2) Mass	b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
						(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS															
Antimony Total (7440-36-0)	X			0.002(Below Detection Limit)						1	mg/L				
Arsenic, Total (7440-38-2)	X			0.003						1	mg/L				
Beryllium Total (7440-41-7)	X			0.002(Below Detection Limit)						1	mg/L				
Cadmium Total (7440-43-9)	X			0.002(Below Detection Limit)						1	mg/L				
Chromium Total (7440-43-9)	X			0.007						1	mg/L				
Copper Total (7550-50-8)	X			0.014						1	mg/L				
Lead Total (7439-92-1)	X			0.008						1	mg/L				
Mercury Total (7439-97-6)	X			162 x 10 ⁻⁶						1	mg/L				
Nickel, Total (7440-02-0)	X			0.013						1	mg/L				
Selenium, Total (7782-49-2)	X			0.004						1	mg/L				

Part C -- Continued														
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. of No. of Analyses	a. Long-Term Avg Value (1)	(2)	b. of No. of Analyses	
				(1)	(2)	(1)	(2)	(1)	(2)					
				Concentration	Mass	Concentration	Mass	Concentration	Mass					
METALS, CYANIDE AND TOTAL PHENOLS (Continued)														
Silver, Total (7440-28-0)	X			0.002(Below Detection Limit)						1	mg/L			
Thallium, Total (7440-28-0)	X			0.005(Below Detection Limit)						1	mg/L			
Zinc, Total (7440-66-6)	X			0.038						1	mg/L			
Cyanide, Total (57-12-5)	X			0.02(Below Detection Limit)						1	mg/L			
Phenols, Total	X			0.05(Below Detection Limit)						1	mg/L			

KPDES FORM SDAA



Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

I. Project Information

Facility Name: KDNR No. 880-0148 A4, Beech Fork Processing, Inc.

Location: P.O. Box 190 Lovely, KY 41231

County: Martin

Receiving Waters Impacted: Tributaries of Middle Fork of Rockcastle Creek

II. Socioeconomic Demonstration

1. Define the boundaries of the affected community:

(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

The proposed project is an area/contour/auger mining operation (KDNR Permit No. 880-0148 A4). The project will be recovering reserves from the Clarion, Coalburg, and Stockton coal seams. The site is located 0.75 miles north of State Route 3 and the Davella Road Jct., 0.1 mile north of Middle Fork and Rockcastle Creek in Martin County, within the Inez and Offutt 7.5 minute quadrangles. The nearest community is Davella, KY, which is 2 miles northwest of the project site. All discharge would enter Setser Branch of Middle Fork of Rockcastle Creek of the Tug Fork. The proposed project area is located in the Middle Fork of Rockcastle Creek HUC# 05070201-210-070.

2. The effect on employment in the affected community:

The economy in this portion of Martin County is dependent on the mining industry. This operation will provide for the continuation of 40 higher-wage permanent jobs in the area work force. This also positively affects as many as 60 employees in the support industries that will help to supply the material and equipment needed for mining, as well as other services, such as engineering and training. The August 2009 unemployment rate for Martin County is estimated at 12.4%, higher than the Kentucky average (10.9%), as well as being higher than the average for the entire United States (9.7%). See the table below for additional employment data for Martin County

Martin County, KY Employment Data

Labor Force	3,453
Percent Unemployment	12.6
Total Unemployed	435
% of Labor Force Employed by this Project	1.16%
% of Labor Force Affected by this Project	2.90%

September 2009, Bureau of Labor Statistics

With the current unemployment rates in this county, it is likely that a new mine will at the very least avoid an increase in unemployment rates by directly supplying 40 continuing jobs and indirectly affecting as many as 60 employees in the support industries.

II. Socioeconomic Demonstration- continued

3. The effect on median household income levels in the affected community:

This mining operation would provide employment for an estimated 40 employees. These mining positions prove to be higher paying jobs than other industries in Martin County. This also positively affects as many as 60 employees in the support industries that will help to supply the material and equipment needed for mining, as well as other services, such as engineering and training. See the table below for income data for this county.

Martin County	Wages
All Industries	\$604.00
Mining	\$1,048.00

Weekly salary provided by 2009, Kentucky Workforce Development Cabinet

The average weekly wage in the mining industry is approximately 73.5% higher compared to the average weekly wage for all industries in all Martin County. Loss of these higher-paying jobs would result in decreased revenue to local businesses that cater to the needs of the employees on a daily basis.

4. The effect on tax revenues of the affected community:

Recovery of the Clarion, Coalburg, and Stockton coal seams over the life of the project will produce over 6.2 million tons of coal. This will generate over \$23.6 million in severance taxes, of which the surrounding counties will receive a total of over \$3.5 million dollars (15 percent). Additional revenue will be given to local businesses, generated through increased employment to handle support services catering to the mining operation directly and to the needs of the employees on a daily basis. Local income taxes, property taxes, and sales taxes will also add to revenue brought in by the mining facility.

5. The effect on an existing environmental or public health in affected community:

Recovery of the coal will increase severance tax revenues by over \$23.6 million over the life of the project, approximately \$3.5 million of which will be returned to the surrounding counties. This money can be used for environmental protection such as sewage disposal, sanitation, and solid waste disposal, which will have beneficial effects on the existing environment and public health.

Portions of this area in Martin County have been previously mined and logged. Beech Fork proposes to build 8 additional ponds in Amendment 4 (a total of 18 ponds on the entire project) to treat any currently unmitigated discharge into the surrounding waters of the watershed. In addition, the area will be re-graded to prevent additional erosion from the previous logging activities. Following the conclusion of mining, the area will be reclaimed, which will provide an enhanced habitat and environment.

II. Socioeconomic Demonstration- continued

6. Discuss any other economic or social benefit to the affected community:

This project will not only provide employment at a higher-than-average weekly wage, but will create additional revenue for the existing businesses in and around Martin County. The additional revenue for the local businesses and the severance tax dollars generated by this project (\$3.5 million) will provide the local government increased benefits in public safety (law enforcement, fire protection, ambulance services) and also aid industrial and economic development in the surrounding communities.

The facility will continue to provide employment to an estimated 40 workers during the life of the operation. The project will also help to provide as many as 60 additional jobs in other sectors of the economy, such as engineering, fuel, and transportation. Therefore, the proposed mining operations positively affect the local economy more than other industries.

Following remediation of the site, it is possible that there will be an increase of local flora and fauna, both of which could increase local tourism.

Surface mining is the most efficient and economical plan for recovery of the coal associated with this project. This allows for maximum removal of coal reserves, increasing the amount of tax dollars that contribute to the state and local economy.

III. Alternative Analysis

1. Pollution prevention measures:

Several alternatives were evaluated for prevention of water pollution in this project area. Evaluated alternatives include:

a. avoidance of the project (short-term)

Avoiding this project would mean that the advantages of economic development in the Martin County community area would not be realized. At a minimum, 40 local jobs would be lost, the tax base would diminish (\$3.5 million in taxes would not be collected), and local businesses would not prosper to the same extent.

b. Additional Levels of Separation

Further prevention could include covering or treating of chemically reactive materials, reducing the disturbed surface area at any one time, or the separation of normal storm runoff and active site runoff.

c. Preventive Design

Preventive design could include creating only moderate gradients and inclines to slow down runoff, or diverting waterways and drainage. With these methods, the amount and frequency of flow through active mining sites can be minimized. All of the water that does leave the site will be treated with a system of sediment and treatment ponds. Each will store any runoff leaving the site and provide an adequate time to settle the sediment. As necessary and practicable, flocculants and chemicals will be added to treat the water if higher levels of certain chemicals and compounds are observed.

III. Alternative Analysis - continued

2. The use of best management practices to minimize impacts:

Such BMPs could include creating only moderate gradients and inclines to slow down runoff and diverting waterways and drainage. With these methods, the amount and frequency of flow through active mining sites can be minimized. All the water that does leave the site will be treated with a system of sediment and treatment ponds. Each will store any runoff leaving the site and provide an adequate time to settle the sediment. As necessary and practicable, flocculants and chemicals will be added to treat the water if higher levels of certain chemicals and compounds are observed.

Additionally, an undisturbed natural barrier could be maintained throughout mining at the lowest disturbed elevation and extend from the out slope. This vegetative buffer could serve the function of improving water quality by the collection of sediment and the reduction of erosion.

With the conclusion of mining, the area will be reclaimed. Any affected streams will be stabilized and restored, and a riparian buffer will be established. These rehabilitated streams will curb sedimentation and provide a habitat for aquatic species and wildlife. Until final bond release, various sediment and treatment ponds will remain. Discharge will be treated as necessary and practicable, to ensure that the water leaving the permit is within water quality standards.

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:

(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of these opportunities are to be implemented)

Water does play a key part in mining operations as far as misting/spraying the area to help alleviate airborne coal dust. However, the amount of water required for dust suppression is minimal compared to the discharge generated. Water used for dust suppression in a day on a large surface mine would be less than 12,000 gallons, compared to the estimated 3.5 billion gallons leaving the site during the life of the project. Dust suppression is generally only required during dry times when the flow of the surface discharge is low or non-existent.

A small portion (approximately 4.7 million gallons) of the total discharge generated (approximately 3.5 billion gallons) will be used for hydro-seeding when grade work is completed on this project. This will require approximately 1,578 loads (3000 gallons per load), with a cost of over \$1.2 million (\$750/load).

The construction of a lake for recreational purposes was also evaluated as a possible alternative. This would involve acquisition of the land, environmental and engineering surveys, and construction of a dam, at the very least. The estimated cost of this alternative is \$5.6 million.

Coal mining is not a water dependent operation, so recycling or reuse of water would not be beneficial.

4. Application of water conservation methods:

Water collected in sediment ponds before being discharged will be used for dust suppression. While only a small fraction of total discharge, reusing this water will prevent possible withdrawals of other natural streams and wells.

When practicable, the proposed project will reuse discharges containing high concentrations of solids for irrigation to reclaimed land.

Upon closing of the site, the water required for remediation (including hydro seeding) may also be provided by on-site detained water, if practicable. Reusing this water will prevent possible withdrawals of other natural streams and wells.

Mining is not a water dependent operation, so conservation of water is not a major concern for mining operations.

III. Alternative Analysis - continued

5. Alternative or enhanced treatment technology:

Several alternatives for treating water from the project area and discharging it to streams and rivers in the area have been evaluated. These alternatives include construction of a water treatment facility, construction of physical filter barriers, chemical treatment, and construction of wetlands.

Water Treatment Facility Construction of a small water treatment facility (500,000 gallons per day) on the project site would cost over \$ 1.6 billion dollars, plus an additional cost of approximately \$50,000 for a containment reservoir. This water treatment facility would not be able to manage the large amount of water required at this site (over 382,888 gallons per minute peak discharge). It would require 1,103 of these small facilities or one large facility (over \$1.9 billion) to handle this amount.

Physical Filter Barriers Silt fences and straw bales are designed for use with small discharges, and would not be able to handle the large discharge flow generated nor would they meet requirements of Commonwealth of Kentucky's Surface Mine Regulations as stated in 405 KAR 16:070.

Chemical Treatment Chemical treatment of drainage was also considered. The primary treatment required at this site is the removal of sediments, which requires the use of ponds or dugouts to hold the water while the soil and debris settles out. Chemicals may be used to augment this process, but sediment removal is not possible using chemical treatment alone. It would cost at least \$1.7 million to treat the entire volume of discharge at this site (over 3.5 billion gallons over five years).

Wetland Construction Constructed wetlands have traditionally been used for biological treatment. However, the discharge generated by this operation will require sedimentation control measures, and wetlands are not effective for treating sediment. Additionally, wetlands used for water treatment would require additional property (approximately 10.6 acres), which is not available in this particular project area. It would cost approximately \$92,750 to construct these wetlands.

III. Alternative Analysis - continued

6. Improved operation and maintenance of existing treatment systems:

If there are on-bench ponds in working condition, they will be utilized. However, there are no existing ponds on the site and in-stream ponds are not available for use.

Pumping or trucking the runoff to the nearest wastewater treatment plant will require significant changes to the Inez Wastewater Treatment Plant, 6.4 miles away. That plant cannot receive sediment-laden water and would have to construct a sediment basin to serve a similar function to on-site sediment ponds.

7. Seasonal or controlled discharge options:

The proposal for this project would include the construction of sediment ponds to ensure controlled release of generated runoff under optimal conditions. The sediment ponds reduce the velocity of storm water, thus enhancing sedimentation and reducing its deposition within the stream. In this way a controlled volume and quality of water is released in order to refrain from overwhelming the natural system. The ponds are designed for a 25-year, 24 hour storm event. Discharge to streams with less than 0.1 cfs will not occur when other practicable alternatives exist.

Additionally, the construction of a lake for physical detention of the water and later recreational purposes was evaluated as a possible alternative. This would involve acquisition of the land, environmental and engineering surveys, and construction of a dam, at the very least. The estimated cost of this alternative is \$5.6 million.

Another alternative is on-site storage in 50,000-gallon septic tanks, and eventual release into the surrounding area. In order to store the amount of discharge generated at this site in one year, 26,483 storage tanks would be required, with a potential cost of over \$3.2 billion for the tanks alone. 24" diameter HDPE pipe (\$67/foot) would be required to transport the discharge to the tanks, with a cost of over \$5.3 million for over 80,000 feet of pipe. This would require the excavation of at least 703 acres of land (647 acres for the tanks and 56 acres for the leach field) to a depth of 15 feet. Because of the amount of sediment in the discharge, the tanks would have to be cleaned out at least once per year, at a cost of approximately \$887 million (\$6700 per tank per year). After excavation in order to install the tanks and after each cleaning, the extra dirt and sediment would have to be added to the existing hollow fill, or used to create another hollow fill, resulting in greater disruption of the natural contours of the area.

III. Alternative Analysis - continued

8. Land application or infiltration or disposal via an Underground Injection Control Well

An alternative to surface discharge from the project area is sub-surface disposal. Deep mining has been conducted in the vicinity of the project area. Therefore, the sub-surface disposal of drainage from the project area would present safety concerns for any present deep mining operations, and the cost would be high, due to a lifting station (\$218,000), 24" dia. HDPE pipe (~\$1.1 million), and possibly drilling an injection well, which could cost up to \$50,000 per well, depending on depth. Injecting this discharge underground would increase the potential of an outcrop blow-out or blow-out from an old adit and would require a UIC Permit. A suitable place to inject, within 0.5 miles of this site, has not been found. In addition to potential safety impacts associated with subsurface disposal, this alternative would reduce the quantity of water available to support downstream aquatic communities.

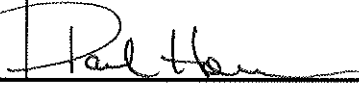
Another alternative is on-site storage in 50,000-gallon septic tanks, and eventual release into the surrounding area. In order to store the amount of discharge generated at this site in one year, 26,483 storage tanks would be required, with a potential cost of over \$3.2 billion for the tanks alone. 24" diameter HDPE pipe (\$67/foot) would be required to transport the discharge to the tanks, with a cost of over \$5.3 million for over 79,448 feet of pipe. This would require the excavation of at least 703 acres of land (647 acres for the tanks and 56 acres for the leach field) to a depth of 15 feet. Because of the amount of sediment in the discharge, the tanks would have to be cleaned out at least once per year, at a cost of approximately \$887 million (\$6700 per tank per year). After excavation in order to install the tanks and after each cleaning, the extra dirt and sediment would have to be added to the existing hollow fill, or used to create another hollow fill, resulting in greater disruption of the natural contours of the area.

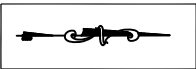
9. Discharge to other treatment systems

Alternative treatment works have been investigated, including piping and trucking the discharge to the nearest water treatment plant.

- It would take approximately \$2.3 million (33,792 feet of 24" diameter HDPE pipe at \$67/ft.) to run 24" diameter HDPE pipe to the nearest municipal water treatment plant, which is the Inez Wastewater Treatment Plant in Inez, Kentucky. The Inez treatment plant would then require a sedimentation basin to remove the silt before allowing the water to enter their plant.
- It would require 16 trucks with a capacity of 5,000 gallons each, working 24 hours a day, to haul the discharge to the Inez treatment plant. The trucks would cost over \$3.9 million (\$230,000 per truck), and maintenance and gas would cost over \$57,000 per day (\$21.9 million over the 5-year life of the project), for a total cost of over \$25.6 million.

IV. Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	Paul Horn MANAGER OF ENGINEERING (POA)	Telephone No.:	(606) 298-2300
Signature:		Date:	12-8-2009



PROPERTY OWNER CHART			
1. JOHNSON INDUSTRIES CORP.	100%	14. TERRYSON SUBS. V. CORP.	100%
2. TERRYSON SUBS. V. CORP.	100%	15. TERRYSON SUBS. V. CORP.	100%
3. J. L. WALKER & CO.	100%	16. TERRYSON SUBS. V. CORP.	100%
4. TERRYSON SUBS. V. CORP.	100%	17. TERRYSON SUBS. V. CORP.	100%
5. TERRYSON SUBS. V. CORP.	100%	18. TERRYSON SUBS. V. CORP.	100%
6. TERRYSON SUBS. V. CORP.	100%	19. TERRYSON SUBS. V. CORP.	100%
7. TERRYSON SUBS. V. CORP.	100%	20. TERRYSON SUBS. V. CORP.	100%
8. TERRYSON SUBS. V. CORP.	100%	21. TERRYSON SUBS. V. CORP.	100%
9. TERRYSON SUBS. V. CORP.	100%	22. TERRYSON SUBS. V. CORP.	100%
10. TERRYSON SUBS. V. CORP.	100%	23. TERRYSON SUBS. V. CORP.	100%
11. TERRYSON SUBS. V. CORP.	100%	24. TERRYSON SUBS. V. CORP.	100%
12. TERRYSON SUBS. V. CORP.	100%	25. TERRYSON SUBS. V. CORP.	100%
13. TERRYSON SUBS. V. CORP.	100%	26. TERRYSON SUBS. V. CORP.	100%

NOTE: PROPERTY IS OWNED BY JOHNSON INDUSTRIES CORP. AND NOT OWNED BY TERRYSON SUBS. V. CORP.

